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09/773,605	02/02/2001	Tadahiro Ohmi	SUGI0064	7328

7590 02/12/2004  
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EXAMINER

LEUNG, JENNIFER A

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/773,605

Applicant(s)

OHMI ET AL.

Examiner

Jennifer A. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, claims 1-6, on November 21, 2003 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 7-20 are withdrawn from further consideration pursuant to 37 CFR 1.142 (b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

4. Figures 5, 6 and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **WVG** (i.e., "reactor for generating moisture"; page 9, line 5; page 10, line 13+).

6. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

7. The disclosure is objected to because of the following informalities:
- Page 4 (line 19): “passage 7a” should be changed to -- passage 7 --, as set forth on page 1, line 27 to page 2, line 2.
  - Page 8 (lines 10-13): FIG. 5, 6 and 7 should be indicated as “Prior Art”.
  - Page 12 (line 10): “ican” should be changed to -- can -- for proper grammatical form.
8. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware. Appropriate correction is required.

***Claim Objections***

9. Claim 5 is objected to because “either” (line 1) should be omitted for proper grammatical form. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohmi et al. (EP 0 878 443). Applicant cannot rely upon the foreign priority papers to overcome this rejection

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because a translation of said papers has not been made of record in accordance with 37 CFR

1.55. See MPEP § 201.15.

Regarding claims 1 and 2, Ohmi et al. (FIG. 45; page 19, lines 10-14, 49-50) discloses an apparatus comprising:

a reactor (i.e., water-generating reactor 33) having an upstream gas inlet side, a downstream moisture outlet side, and a catalyst (i.e., platinum coating film) for generating moisture from hydrogen and oxygen (i.e., introduced via  $H_2 \rightarrow$ ,  $O_2 \rightarrow$ ); and means for reducing pressure provided on the downstream side of the reactor 33, wherein the means comprises a filter (i.e., F3)

Regarding claims 3-6, Ohmi (FIG. 43; page 18, lines 57) discloses reactor 33 comprising: a first reactor structural component (i.e., body member 22) having a material gas supply joint 24 defining a material gas supply passage 24a; a second reactor structural component (i.e., body member 23) having a moisture gas take-out joint 25 defining a moisture outlet passage 25a, wherein the structural components are mated to form a reactor shell 21 having an interior space (i.e., recess 22a, 23a), and wherein the second component 23 defines an inside wall surface 32; and a reflector(s) comprising a first reflector (i.e., reflector plate 29a) disposed in the interior space 22a to face the material gas supply passage 24a, and/or a second reflector (i.e., reflector plate 29a') disposed in the interior space 23a to face the moisture outlet passage 25a; wherein the catalyst comprises a platinum coated catalyst layer (i.e., a platinum coating film) provided on the inside wall surface 32 of the second reactor structural component 23.

Instant claims 1-6 structurally read on the apparatus of Ohmi et al.

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11. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohmi et al. (WO 98/57884). [NOTE: the English Language Equivalent (US 6,093,662) is being cited below, for translation purposes only]. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Regarding claims 1 and 2, Ohmi et al. (FIG. 7; column 7, lines 35-46) disclose:

a reactor 1 having an upstream gas inlet side, a downstream moisture outlet side, and a catalyst (i.e., a platinum-coated catalyst layer; column 10, lines 7-25) for generating moisture from hydrogen and oxygen (i.e., supplied via  $H_2 \rightarrow$ ,  $O_2 \rightarrow$ ); and means for reducing pressure provided on the downstream side of the reactor 1, wherein the means comprises a filter F3 and valves V6, V7 (FIG. 7), or in an prior embodiment, suction regulating valve SV, valves V4, V5, V6 for vacuum pump P (FIG. 1).

Regarding claims 3-6, Ohmi et al. (FIG. 8, 9; column 9, line 1 to column 10, line 6) further disclose reactor 1 comprising:

a first reactor structural component 2 having a material gas supply joint 4 defining a material gas supply passage 4a;

a second reactor structural component 3 having a moisture gas take-out joint 5 defining a moisture outlet passage 5a, wherein the structural components 2, 3 are mated to form a reactor shell 1 having an interior space 1a, and wherein the second component 3 defines an inside wall surface 3a; and

a reflector(s) comprising a first reflector (i.e., inlet reflector unit 9) disposed in the interior space 1a to face the material gas supply passage 4a, and/or a second reflector (i.e., outlet

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reflector unit 12) disposed in the interior space 1a to face the moisture outlet passage 5a; wherein the catalyst comprises a platinum coated catalyst layer 13 provided on the inside wall surface 3a of the second reactor structural component 3.

Instant claims 1-6 structurally read on the apparatus of Ohmi et al.

12. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanabe et al. (US 6,274,098). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Regarding claims 1 and 2, Tanabe (FIG. 1; column 4, lines 40-65) discloses:  
a reactor (i.e., reactors 5, 6) having an upstream gas inlet side, a downstream moisture outlet side, and a catalyst (i.e., platinum-coated catalyst layer 5h; FIG. 2) for generating moisture from hydrogen and oxygen (i.e., supplied from furnace 2 and  $\text{---} \rightarrow \text{O}_2$ ); and means for reducing pressure provided on the downstream side of the reactor 5, 6, wherein the means comprises drain reservoirs 9, 10 as well as valves 18, 19.

Regarding claims 3-6, Tanabe (FIG. 2; column 4, lines 56-65) discloses:  
a first reactor structural component 5b having a material gas supply joint 5a defining a material gas supply passage;  
a second reactor structural component 5d having a moisture gas take-out joint 5c defining a moisture outlet passage, wherein the structural components are mated to form a reactor shell 5, 6 having an interior space, and wherein the second component 5d defines an inside wall surface 5h; and  
a reflector disposed in the interior space, comprising a first reflector 5e disposed in the interior

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space to face the material gas supply **5a**, and/or a second reflector **5f** disposed in the interior space to face the moisture outlet **5c**; and wherein the catalyst comprises a platinum coated catalyst layer provided on the inside wall surface **5h** of the second reactor structural component **5d**.

Instant claims 1-6 structurally read on the apparatus of Tanabe et al.

13. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Minami et al. (US 6,334,962). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Regarding claims 1 and 2, Minami (FIG. 1) discloses an apparatus comprising: a reactor (i.e., reactor for the generation of moisture **1**) having an upstream gas inlet side, a downstream moisture outlet side, and a catalyst (i.e., platinum-coated catalyst layer **13**; FIG. 7) for generating moisture from hydrogen and oxygen; and means for reducing pressure provided on the downstream side of the reactor **1**, said means comprising a filter **F<sub>3</sub>** (FIG. 1) or valve **SV** (FIG. 2), for example.

Regarding claims 3-6, Minami (FIG. 7; column 1, lines 43 to column 2, line 5) discloses the reactor **1** may comprise a prior art reactor having: a first reactor structural component **2** having a material gas supply joint **4** defining a material gas supply passage **4a**; a second reactor structural component **3** having a moisture gas take-out joint **5** defining a moisture outlet passage **5a**, wherein the structural components **2**, **3** are mated to form a reactor shell **1** having an interior space, and wherein the second component **3** defines an



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inside wall surface (i.e., identified by 13); and  
a reflector disposed in the interior space, comprising a first reflector 9 disposed in the interior space to face the material gas supply passage 4a, and/or a second reflector 12 disposed in the interior space to face the moisture outlet passage 5a; and  
wherein the catalyst comprises a platinum coated catalyst layer 13 provided on the inside wall surface of the second reactor structural component 3.

Instant claims 1-6 structurally read on the apparatus of Minami et al.

14. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohmi et al. (US 6,180,067). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Regarding claim 1, Ohmi (FIG. 1; column 6, lines 17-29) discloses:

a reactor 1 having an upstream gas inlet side (i.e., facing joint 4), a downstream moisture outlet side (i.e., facing joint 5), and a catalyst (i.e., platinum coated catalyst layer 13) for generating moisture from hydrogen and oxygen; and  
means for reducing pressure provided on the downstream side of the reactor 1, wherein the means comprises outlet diffusion filter 11c (column 8, lines 1-20).

Regarding claims 3-6, Ohmi (FIG. 1; column 6, lines 17-62) discloses:

a first reactor structural component 2 having a material gas supply joint 4 defining a material gas supply passage 4a;  
a second reactor structural component 3 having a moisture gas take-out joint 5 defining a moisture outlet passage 5a, wherein the structural components 2, 3 are mated to form a

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reactor shell **1** having an interior space **1a**, and wherein the second component **3** defines an inside wall surface **3a**; and

a reflector disposed in the interior space, comprising a first reflector **9** disposed in the interior space **1a** to face the material gas supply passage **4a**, and/or a second reflector **11** disposed in the interior space **1a** to face the moisture outlet passage **5a**;

wherein the catalyst **13** comprises a platinum coated catalyst layer provided on the inside wall surface **3a** of the second reactor structural component **3**.

Instant claims 1-6 structurally read on the apparatus of Ohmi et al.

15. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Henrie (US 3,755,075).

Regarding claim 1, Henrie (FIG. 1; column 3, lines 15-40) discloses an apparatus comprising a reactor (i.e., catalyst-condenser zone **14**) having an upstream gas inlet side (i.e., facing stream **12**), a downstream moisture outlet side (i.e., facing stream **20**), and a catalyst **16** for generating moisture from hydrogen and oxygen (i.e., supplied from source **10**); and means for reducing pressure provided on the downstream side of the reactor (i.e., "condensation of water vapor by condenser **18** causes pressure **P<sub>2</sub>** downstream of the catalyst to be lower than pressure **P<sub>1</sub>**, upstream from the catalyst").

Regarding claim 2, Henrie (FIG. 3; column 5, lines 58-64) discloses uncondensed gases **124** may be withdrawn via, "a pump **126**, which will normally be of the steam jet air ejector type," (i.e., orifice), and apparatus may further comprise a gas treatment zone **128** downstream of the reactor, wherein the gases are filtered (i.e., filter).

Instant claims 1 and 2 structurally read on the apparatus of Henrie.

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**Conclusion**

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Patent Application Publications US 2001/0048907 and US 2002/0136676 are presented to illustrate Applicant's related, pending applications.

\* \* \*

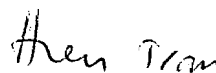
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Leung

January 29, 2004



**HIEN TRAN**  
**PRIMARY EXAMINER**